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Search for new physics in the monophoton final state in proton-proton collisions at root s=13 TeV

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Abstract


A search is conducted for new physics in a final state containing a photon and missing transverse momentum in proton-proton collisions at root s = 13 TeV. The data collected by the CMS experiment at the CERN LHC correspond to an integrated luminosity of 12.9 fb⁻¹. No deviations are observed relative to the predictions of the standard model. The results are interpreted as exclusion limits on the dark matter production cross sections and parameters in models containing extra spatial dimensions. Improved limits are set with respect to previous searches using the monophoton final state. In particular, the limits on the extra dimension model parameters are the most stringent to date in this channel.

Keywords

Author Keywords: [Beyond Standard Model](#); [Dark matter](#); [Hadron-Hadron scattering \(experiments\)](#)KeyWords Plus: [QUANTUM-GRAVITY](#); [DIMENSIONS](#)

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